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AUTHOR Kohut, Kimberley
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ABSTRACT

One way in which communication educators can effectively build students' critical thinking skills is by incorporating argumentation techniques into classroom discussions and assignments. The following argumentation skills are particularly suitable in helping students learn to think more critically. The first technique is the presentation of "facts" as testable claims. One exercise that instructors can employ in getting students to recognize facts as claims or hypotheses to be tested is that of creating a list of all major presuppositions inherent to the claim, either individually or in groups. The second technique is the examination of supporting evidence. Instructors could require students to research the sources used to support the ideas of a given hypothesis. The third technique is for instructors to allow ample time for students to synthesize information in their process of claim assessment, which can be successfully done through journal assignments. Finally, two argumentation skills that particularly lend themselves to degate-formatted exercises are: (1) eliciting a position; and (2) expecting justification of positions. By applying some of these simple strategies instructors can help students develop thinking skills that they can utilize for the remainder of their lives. (Sixteen references are attached.) (KEH)

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Developing Critical Thinking Through the Use of Argumentation Techniques

Kimberley Kohut

Department of Interpersonal and Public Communication
Bowling Green State University

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ABSTRACT

Educators are recognizing more and more the need for developing students' critical-thinking skills in the classroom. One way of doing so is by incorporating techniques of argumentation into class discussions and assignments. Five argumentation skills are highlighted: 1. presenting "facts" as testable claims, 2. requiring evidence, 3. making time for synthesis, 4. eliciting a position, and 5. expecting justification of positions. Instructors may use these argumentation skills to help students learn to think more critically. In each case where a suggestion is made for incorporating these skills, specific activities are outlined for implementing it into the classroom.

Developing Critical Thinking Through the Use of Argumentation Techniques

The buzz word in education today seems to be "critical thinking." Unfortunately, the popularity of the term stems from the desperate need for it in college classrooms. More and more instructors complain of students who appear to be in class for no other reason than to play the "input/output" game--ingesting facts and figures to later regurgitate them on examinations. As our nation's educational system--as well as our place in the world market--continues to slip behind that of our competitors, we are obligated as teachers to ask ourselves what can be done in the classroom to help produce citizens who will put critical skills to use in the answering of real questions and the solving of real problems. Though recent research and instructional development has suggested that principles of critical thinking can be developed within a college curriculum and taught via certain strategies and practices (Fuller, 1977; Furedy and Furedy, 1979; Kerr, 1978; Smith; 1977, Stonewater, 1980), far less literature has been devoted to the development of those strategies themselves. The purpose of this article is to suggest that the incorporation of argumentation techniques into classroom discussions is one way in which we can effectively build students' critical-thinking skills. In each case where a

suggestion is made for incorporating these skills, specific activities are outlined for the classroom.

Critical thinking is more and more frequently becoming associated with the discipline of argumentation. B.K. Beyer writes that abilities to recognize, analyze, judge, and formulate arguments are, in fact, central to critical thinking (1990). Lawson and Kral suggest that the act of argumentative writing forces students to reason and think reflectively (1985). Kinney defines critical thinking as associated with the evaluation of products of thought. He cites "an assignment that calls for the identification or clarification of assumptions underlying arguments" as an "example" of such a task (1980). Perhaps the most blatant marriage of critical thinking and argumentation occurs in recent textbooks like Critical Thinking: The Analysis of Arguments in which James Herrick defines critical thinking as "thinking informed by an awareness of the criteria for judging the ethicality and reasonableness of arguments, and a willingness to apply these criteria consistently" (Herrick, 1991, p.37).

Though instructors might consider argumentation a communication discipline in and of itself to be addressed in its own separate course, we would be wise to identify the parallel between argumentation principles and skills of critical thinking. Consider the primary parts of an argument: Toulmin defines these as data, warrants, and claims. Herrick identifies them as reasons, inferences, and conclusions (1991). However one defines argument, it cannot be denied that the key to argumentation is

the ability to reason out conclusions from an array of facts. How is this different from what we attempt to get students to do in class? It isn't. When we encourage critical thinking, we are encouraging students to assess and develop arguments. The remainder of this article suggests practical tips for incorporating strategies of argumentation into the classroom with the purpose of developing critical thinking.

Present "Facts" as Testable Claims

McKeachie (1986) asserts that "One of the first steps in teaching may be to stimulate doubt about what has previously been taken for granted" (p. 225). Instructors and students alike tend to see education as merely the transmission of information: what resides in the minds of instructors must be transmitted to the minds of their students, who in turn transmit this onto paper, and then on to examinations at test time. Students are "passive, reactive, noninitiating recipients of knowledge. They have been taught to accept the system, not to question it" (Svinicki and Kraemer, 1980). Critical thinkers, however, are those who know how to test and analyze theories, ideas, facts, and opinions on their own with the goal of drawing their own conclusions. When choices are eliminated from the minds of students--that is, when teachers have already revealed what the "right" answer is--students see no need for critical thought. Lawson and Kral point out that when a teacher "who has students read a passage, asks them to state what they think the passage means, and then proceeds to tell them what the passage really means based upon no

evidence at all...students are not only given no training in the business of testing hypotheses, but they are left with no confidence in their own ideas and a considerable distaste for the critical analysis of literature" (1985, p.223).

One exercise that instructors can employ in getting students to recognize "facts" as claims or hypotheses to be tested is that of creating a list of all major presuppositions inherent to the claim/hypothesis itself. When presenting an idea, theory, or method, have students spend fifteen to twenty minutes either alone or in groups brainstorming a list of all conditions assumed, or presupposed, by that claim. For example, if given a list of four incentives through which managers can motivate employees, students may recognize that the motivational effectiveness of the incentives presupposes such things as workers who are not engaged in strikes, or workers who have never been slighted by company policy in the past. What if these presuppositions are incorrect? Is the value of the claim altered?

When instructors get students to identify the presuppositions underlying major course concepts, the result is a more interested, more curious class that begins to function on a higher level of cognitive development. While the lower stages of cognitive development are characterized by a dualistic view of knowledge--things are true or false, right or wrong. The teacher knows the truth and the student's job is to learn that truth--the recognition that no truth is settled and that some

generalizations are better supported than others marks a higher level of cognitive development (Perry, 1981).

Require Evidence

The foundation of any good argument is supporting evidence. Similarly, if students are to be expected to be critical, the investigation of supporting information is crucial. Instructors must present "old" investigation as something to be scrutinized and the generation of new investigation as an imperative task. Very often, instructors do a fine job of presenting someone else's findings that have been deemed worthy of studying. However, even when they are required to do their own investigating, students are accustomed to exploring that which has already been presented as valuable--and will probably appear on an upcoming test.

Adams (1974) says that a questioning attitude is achieved by conscious effort. One merely needs to begin questioning. Presenting "old" investigation, or research, as something to be critically analyzed invites students to find flaws in the reasoning behind arguments. It presents information as claims, and claims as fallible assertions that can be rejected. Furthermore, by encouraging "new" investigation into "old" claims, we provide students the way in which to accept or reject claims--through good, close, examination and scrutiny.

One way to get students to begin investigating claims is to require them to research the sources that were used to support the ideas of a given hypothesis. Assign half the class members

the following questions to answer when investigating given bibliographies and literature reviews:

Are the given sources credible?

Are the given sources valid?

Have the sources been used in the correct context?

Do the sources adequately substantiate the claim?

The remainder of the class is responsible for generating a list of additional sources related to the given hypothesis. They are responsible for answering the following questions about that literature:

Are your sources credible and valid?

Do your sources and information support the claim?

If not, in what ways does your information contradict the claim?

What questions are raised by your material?

Students who investigate claims in such a manor are empowered in two ways. First, students recognize that any "fact" can indeed be challenged--they do not loom over the heads of students as something to be revered. Secondly, students can be empowered by the realization that they themselves have the means by which to assess the validity of claims generated by even the most prominent of scholars--right at their fingertips in the library.

Make Time for the Synthesizing Process

Instructors must allow ample time for students to synthesize information in their process of claim assessment. This is the

crucial point at which critical thought really takes root--when argumentative warrants are truly examined. Perhaps Aristotle did us a disservice in presenting the quick and easy three-part syllogism as the model of perfect reasoning. For most students, reasoning begins as the synthesis of approximately twenty parts which take time to process down into the neat little threesome. As instructors, we cannot over-emphasize the value of the process of critical thinking. The very back-and-forth nature of the processing of information assures us that ideas are being critically assessed. Students must have time to put the parts of the puzzle together piece by piece without someone standing over them trying to make the inferential leaps for them.

One way instructors can encourage the successful processing of thoughts, information and assessments is by having students keep a personal journal. As claims, presuppositions, and supporting evidence are investigated in class, students keep a running log of how things discussed fit together in their own minds. The journal should be an informal collection of thoughts, ideas, assessments and mental connections made along the way as students analyze claims. The following questions may serve as example criteria for what is to be discussed in journals:

> What interesting and relevant information are you finding surrounding the claim in question?
>
> What questions is this information raising for you in your analysis?

What answers have you been able to generate in the course of your evaluation?

The personal journal provides a valuable way for students to systematically keep track of information and organize their thoughts. It also provides a means for students to reflect upon and re-evaluate ideas at a later date. Perhaps even more importantly, the journals provide instructors a glimpse inside the minds of students as they work through the process of critical analysis.

Elicit a Position

As with any argument as well as with critical thought, there comes a point at which all inferential leaps have been made and taking a position is necessary. As was previously stated, students are accustomed to exploring those ideas that have already been deemed valuable by instructors. Therefore, they are oftentimes not accustomed to taking the risks associated with criticism of those ideas. If we are truly to teach students to be critical thinkers, we must familiarize them with the principle that validity is not necessarily dependent on confirmation of authority. We must offer them outlets in which to channel their critical thoughts and assessments.

Debate has long been the arena in which arguments and argumentation have best been presented. Since this paper has been suggesting ways to incorporate principles of argumentation into the effort to build critical-thinking skills, it only makes sense that this most classic of argumentation techniques be

utilized. The activity I recommend here attempts to get students to forego the urge to align themselves with the "right" positions. Even after assessing claims, presuppositions, and evidence, instructors should not underestimate the influence exerted by the educational conditioning students have received: the myth of the one "right" answer that only the teacher knows and is keeping tucked away to spring upon the unsuspecting student taking a "wrong" position.

One activity that helps students take a position without causing them too great an amount of anxiety is one in which students are assigned to write the dialogue to a hypothetical debate in which they would argue their position. They must include not only their own claims, evidence, and rationale, but their hypothetical opponent's as well. The dialogue is structured similarly to actual debate format:

1. Present your claim and major supporting evidence.
2. Present questions asked by your opponent
3. Present your opponent's attacks on your claims followed by your opponent's claim and major supporting evidence.
4. Present your questions for your opponent
5. Present response to opponent's attacks, followed by final justification for your position.
6. Present opponent's response to your attacks, followed by final justification for opposing position.

While the format may look confusing at the outset, the significance of this activity lies not so much in it's structure, but in the writing process itself. Lawson and Kral note, "Having students write argumentative essays provokes them to reflect, argue, and perhaps modify their beliefs and their reasoning..." (1985, p.223). Constructing hypothetical-debate dialogues enables students to take positions that they have the opportunity to justify in a non-threatening, creative way. Secondly, like the journal, it allows students to see a tangible product of their thought processes that can be read over and re-evaluated if necessary. Lastly, constructing the written dialogue forces students to anticipate the criticisms their own positions elicit and to be prepared to offer competent justifications for their claims.

Expect Justification

As the process of evaluation through critical thought comes full circle, students' assessments in turn fall victim to others' critical evaluation. Lipman (1987) says that "inquiry is self-correcting" (p. 41). Students need to recognize that this is a healthy experience as well as a good opportunity to re-assess the validity of their own claims.

In suggesting an activity that demands that students be able to justify their positions with regard to a particular claim, it is important to notice that while the ability to provide justification is crucial to the process of critical thought, the word "justification" tends to produce a defensiveness in some

students. An activity demanding justification, therefore, needs to be sensitive in it's approach--perhaps slowly working students up to a point in which justifying one's position to a group of peers needn't give anyone heart failure. For this activity, I suggest that students be broken into dyads in which both individuals take turns presenting their positions and justification for those positions to the other. The dyad engages in an informal question-and-answer session in which each works to test the claims of the other, to give suggestions, and to identify weak points in the other's argument.

After working in dyads, instructors may place students in small groups of four to five in which the same activity is repeated--this time with feedback from several individuals. Through the course of their interaction, class members will begin to identify others who share their positions. In the final stage of this activity, then, small groups formed of individuals representing the same position are asked to prepare a brief formal presentation of their views to the rest of the class, after which they must open themselves up to the scrutiny of their peers in what should be a rigorous question-and-answer session.

Summary

Young (1980) states that thinking is a means rather than an end. Helping students learn to think critically is a responsibility that falls on the shoulders of all those who claim to be teachers of "higher education." Beyer echoes Matthew Lipman: "while the opposite of critical thinking is often assumed

to be creative thinking, its actual opposite is undiscriminating, undisciplined, and unquestioning thought--in short, the gullible acceptance of claims" (Beyer, 1988). As instructors we must be in the business of turning out young adults who can reason, decide, and choose competitively in a society that will continually challenge them to do so. In light of this, I believe Norris was correct in highlighting that "critical thinking is not an educational option. Students have a moral right to be taught how to think critically" (1985, p.44).

By applying some of the simple strategies outlined above, instructors can help students develop a skill that they can take with them as they leave the university--a skill they will undoubtedly utilize for the remainder of their lives.

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